*** Your "SOURCE" for the "HOTTEST" News in Radiation Safety ***

THE RADCO REGISTER

VOLUME 13, No. 1 ..... January 2003

A CECOM PUBLICATION FOR THE U.S. ARMY NATIONAL GUARD

DIRECTORATE FOR SAFETY
US ARMY, CECOM
Safe by Design

Straight from
Santa's workshop……

introducing:

RADCPR-NI

it's all "**yule**" need to
generate your **Non-Ionizing**
Equipment Inventory..!!!

in this issue....

The distribution and content of this newsletter is directed to Army National Guard activities for which the U.S. Army Communications-Electronics Command (CECOM) Directorate for Safety, Radiological Engineering Division, serves as RSSO. The RADCO Register is published quarterly and is intended as a medium for the exchange of radiation safety information between CECOM and the National Guard Bureau. The primary distribution of this newsletter is to Occupational Health/State Safety Offices, U.S. Property & Fiscal Offices, and Combined Support Maintenance Shops, with local reproduction encouraged.

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www.monmouth.army.mil\cecom\safety

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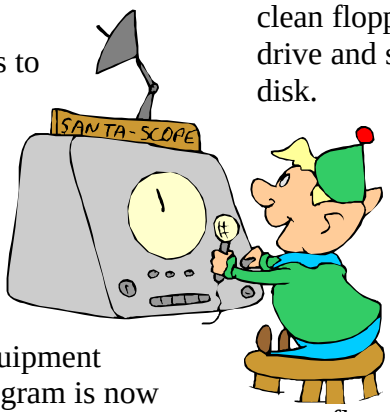
ON GUARD...

Introducing RAD CPR-NI..!!! "Yule" Want to Try it Out!

A while back we had promised you an automated program that could be used to obtain your non-ionizing radioactive equipment inventory. This program would be similar to the RAD CPR program you're already using to generate your annual radioactive commodity inventory. So what were we waiting for anyway **.....** **CHRISTMAS**..??? Well, not exactly, but due to personnel turnover, beta testing troubles, and other unforeseen setbacks, it took a little longer to develop than we had anticipated.

But thanks to Santa and his merry little CECOM **"elves"**.... a non-ionizing radiation-producing equipment inventory program is now available for you to extract your state inventory by using SPBS and a computer program available on the CECOM Safety web site. To use this program here's what you'll need to do:



Log-on to the CECOM Safety web site by typing in the following web address: www.monmouth.army.mil/cecom/safety/index.html

After that page opens, click on the yellow bar "enter DS site," then click on the radiological engineering oval. On the next page click on: "Automation Tools and Databases." When that page comes up scroll down to: **Generating a Non-Ionizing Radiation Producing Equipment Inventory (Standard Property Book System - Remote (SPBS-R)).**

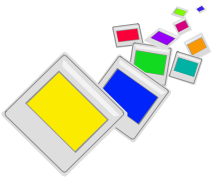
As you scroll down you'll see two files. The first file is: **Radioactive Commodity Property Report (radcprni.exe).** Click on this name and you will be asked if you want to open the file or save it to a disk. Place a clean floppy disk in your **A:** drive and save the file to that disk.

Next, click on **TB 43-0133 Search Data File (tb430133.rsm)** This file opens in TXT format. Save it to the same floppy drive **A:** and be sure to specify .TXT file. (If you do not save it as a text file it will save as a HTML file and it will not run). After this file is saved, you can sign off the internet and wipe the sweat from your brow.

Now, using 'Windows explorer,' or 'My Computer,' click on the $3^{1}/_{2}$ floppy (A:). It should show the following two files you saved to the floppy drive:

1. **RADCPRNI.EXE**
2. **TB430116.TXT**

Click to open: "**Radcprni.exe**." This will expand the disk to 14 files. (Be patient… it takes a while). You are now ready to take the program disk to the USP&FO Property Book Office (PBO).



PLEASE NOTE:
The program will not run unless all files have been expanded.

To extract the inventory: Start SPBS and go to the EXEC mode. At the C>default> prompt, type: **A: SI A;** This will install the program. Then simply follow the directions given in the program.

After the program runs, it will create a print file with .SPL extension and a data file named "TB43rpt.rsm." Save this file to a disk; print out the

report and there you have it …you officially qualify as "Santa's little helper" by having generated your states' Non-ionizing radiation producing equipment list.

The report will list each UIC and the equipment on hand for that UIC. The data file on the disk (tb43rpt.rsm) contains all the data and can be opened and formatted as an Excel spreadsheet.

Next RADCO we'll review how to use this inventory and what you should be looking for in the report. Feel free to contact Gary Ziola should you need additional information. Until then we suggest you take some time and download all the info to a disk … they make great stocking stuffers for your PBO. ☺ ★

The Latest Scoop for the Soils Troop... MC-1 License Amended..!!!

Hear this all you soils engineers, the NRC license for the MC-1, Soil Moisture and Density Tester, managed by TACOM-Warren, has just been amended! NRC license number 21-01222-05 is now working under amendment 13, with an expiration date of September 30, 2012. You can print a copy of this new amendment by going to the DA RSO Reference Guide website at: http://www.monmouth.army.mil/rso/nrclicen/01222-05.pdf. With this amendment, there are a few changes that will affect the way the MC-1 Radiation Safety Program (RSP) is implemented.

So, what are the changes, you ask? Well, here they are:

Local Radiation Safety Officer (LRSO):

A trained and appointed Alternate LRSO is no longer required.

You are only required to have a trained and appointed LRSO. But remember, if this person is not available, you must suspend the use of the MC-1 until a trained LRSO is available. So, it makes sense to have more than one person trained to be an LRSO since this would enable you to appoint this person as the LRSO should the need arise; thus limiting the down time of the MC-1, given that the MC-1 may not be used until a qualified LRSO is trained and appointed.

The LRSO training will consist of the following topics: Principals and Practices of Radiation Safety; Biological Effects of Radiation; RADIAC Instrumentation and Monitoring Techniques; Mathematics and Calibrations that are basic to the use and measurement of radioactivity; and the operation/use of the MC-1.

The following courses have been approved to qualify an individual as an MC-1 LRSO:

1. Radiological Safety Course, 7K-F3-494-F14, US Army Chemical School.

2. Operational Radiation Safety Course, 4J-F2-494-F9, US Army Chemical School.

3. Calibrator Custodian

Course, US Army Chemical School And Technical Engineers Course (51T), US Army Engineer Center.

4. Army National Guard RSO Course, CECOM.

5. USAREUR LRSO Course.

6. Any other training course approved by the TACOM Safety Office.

Surveys:

The interval for the performance of radiation surveys of the MC-1 storage area has changed from quarterly to semiannually.

This survey must be performed by the LRSO and cannot be performed by an operator.

Radiation surveys must also be performed when you first set-up a storage area, to include a background survey prior to placing the MC-1 in the area, and an initial survey once the MC-1 is placed in the area. Also, changes to the storage area require a survey. A closeout survey must be performed if you're no longer storing the MC-1 in the area. Copies of the background, initial, change, and closeout surveys shall be forwarded through the chain of command to TACOM and us.

Leak Testing:

The interval for the performance of a leak test has changed from semiannually to annually.

The leak test will be performed by the LRSO. In the event the LRSO is not available, a certified operator can be designated to perform the leak test. Certification of the operator must be provided to TACOM to validate the performed leak test. Non-unit bulk storage areas (i.e. ECS, etc.) are not required to perform an annual leak test. They, however, must provide a memo indicating whom their LRSO is, Serial Numbers of testers, confirmation of the storage area and the non-use of the tester, and that it is properly stored. Maintain your leak test results on file for 3 years.

How about that…due to the historical safe operation of the soil tester, the requirements for the MC-1 have been "relaxed" somewhat. Typically when you hear from us, we're mandating tighter safety controls. Who says there is no Santa Claus?

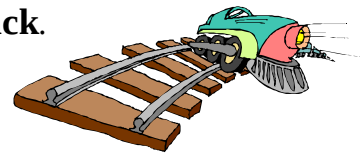
Could that Be… the NRC… Knocking at my Door..???

A while back, the Nuclear Regulatory Commission (NRC) decided to pay a couple of visits to ARNG locations in PA and NJ. Why PA and NJ you may ask? One would guess it's because these states are closest to the NRC northeast regional office. Or maybe the inspectors couldn't afford to pay all the road tolls to travel any further ☺. As it turns out, both states were in good shape. Can you say the same about your Radiation Safety Programs?

Now, what's the NRC got on their Christmas wish list? The NRC is interested in the accountability of radioactive commodities, specifically, the M43A1 Chemical Agent Alarm Systems (CAAS) and the Chemical Agent Monitors (CAM). SBCCOM, the Licensee for these items, has made reports to the NRC of alleged lost and/or unaccounted CAASs. These items have been known to disappear into thin air. But we know that's not possible! Someone knows where they are (and hopefully it's you).

Sure, things do get lost. But more often than not people are *not* tracking them well. It's also possible the

hang-up is just in getting information squared away between the tracking systems (DoD RATTS, TIMMS, PBUSE, etc.). In any case, the NRC perceives a possible problem in accountability and wants to make sure things stay on the right **track**.



So what should you do? Provide guidance and appropriate training to the unit folks. Stress the importance of careful tracking of RAD commodities, and of keeping databases systematically updated. The NRC could pay a visit to any one of your units at any time and the units should be prepared to give a good accounting.

As you all well know, one of the problems of maintaining accountability stems from there being more than one database for tracking these commodities. Some people use the TIMMS system and some people use their own property systems, and then there's the currently official RATTS system, as well as the newly introduced PBUSE system.

So what to do? Compare your databases. Resolve any differences. Make sure the RATTS report (or the PBUSE, as appropriate) has no errors. Provide training to unit personnel on how to keep the databases current, how to deal with discrepancies and how to proceed in tracking down supposedly missing items. An article in the April 2002 RADCO Register on "Keeping Tabs on Your CADS," should be helpful with regard to tracking problems, especially in connection with wipe tests, leak tests, etc.

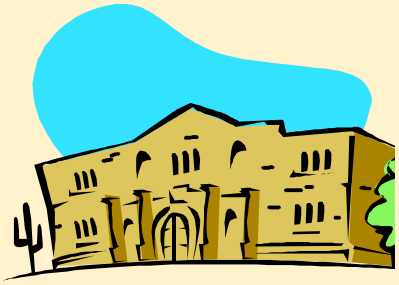
And speaking of the latter, make sure unit personnel are very clear as to the leak testing requirements for the Chemical Agent Alarms and Chemical Agent Monitors.

Ensure they can describe these requirements to the NRC, if asked.

If you need additional information or assistance from us, give Nick Bykovetz a call. He's anxious to help get your tracking programs on the right track… which will help to keep the NRC from stopping you in **<u>your tracks</u>**.

KUDOS in San Antonio, TX

Congratulations for a job well done to all of the Army National Guard (ARNG) members who attended the CECOM Directorate for Safety 40 hour Radiation Safety Officer Course held at San Antonio, Texas, 18-22 November 2002. We would like to take this opportunity to recognize two students who distinguished themselves by achieving the highest final course grade of 98. That honor goes to Gary Chamberlain from the Virginia ARNG and Bernardo Lopez from the California ARNG. You clearly "**walked-the-walk**" while strolling down the "**Riverwalk**." Keep up the good work, you and all of your classmates are a credit to the ARNG.



Catch the RADCO Wave...

Join your fellow RSO net surfers at: **www.monmouth.army.mil/cecom/safety/rpub/radco.htm** where we've posted the last three years of our **RADCO Newsletters**.

It's hip...

it's cool...

it's RAD...!!!

(Back issues of the RADCO, prior to 1999, are available upon request.)

On a Need to Know Basis...

The TACOM-Rock Island (RI) Safety Office is asking for a final commanders verification that the following rifle sites have been removed from the field:

- **M16 rifles with front post sights containing Promethium-147 (Pm^{147}), NSNs: 1005-00-145-6378 or 1005-00-071-7030;**
- **M16A1 rifles containing Tritium (H^3), NSN 1005-00-234-1568.**

While TACOM-RI , the licensee for these items, appreciates the attention given this matter and subsequent removal from the field of many of the M16/M16A1 rifles, they need to ensure that 100% of these sights are removed from service. Their NRC license authorizes these isotopes solely for the purpose of disposal only.

With the modification of these weapons to the M16A2 configuration, the front post sights were replaced with a non-radioactive iron front post sight (NSN 1005-01-134-3625).

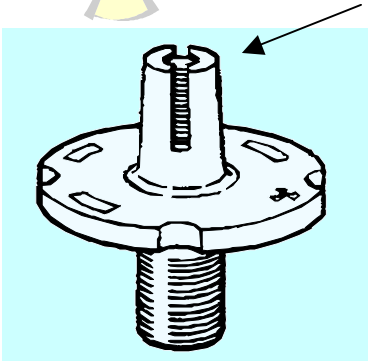
We request your armorers verify that no radioactive sights remain by having them check the weapons when performing muzzle counts. The radioactive sights are recognized by:

- **the presence of a Pyrex vial inserted in the post and a small radioactive trefoil symbol.**

If any of these sights are found they must be removed and replaced with iron sights.

- **PLEASE NOTE: Due to decay of the isotopes, the sights are not likely to be glowing significantly.**

ILLUMINANT (H-3/Pm-147)



Therefore, the individual weapons must be examined closely for the presence of the Pyrex vial as opposed to looking for glowing sights in a darkened room. Any Pm^{147} or tritium sights that are found must be removed from the weapons and turned over to USP&FO for storage/ disposal as radioactive waste.

The TACOM-RI point of contact is Mr. Jeff Havenner, DSN 793-2965. ☆

Hot off the Presses... TB Med 521

The new Technical Bulletin - Medical 521 (TB MED 521), entitled "Occupational and Environmental Health Management and Control of Diagnostic, Therapeutic, and Medical Research X-Ray Systems and Facilities," dated 26 February 2002, hit the comeback trail in November 2002. You may order a copy through your tech pubs office or download a copy at: http://chppm-www.apgea.army.mil.

This bulletin applies to all Active Army, U.S. Army National Guard (ARNG), and U.S. Army Reserve (USAR) elements worldwide that acquire, possess, install, calibrate, maintain, evaluate, use, or dispose of diagnostic, therapeutic, or medical research x-ray systems.

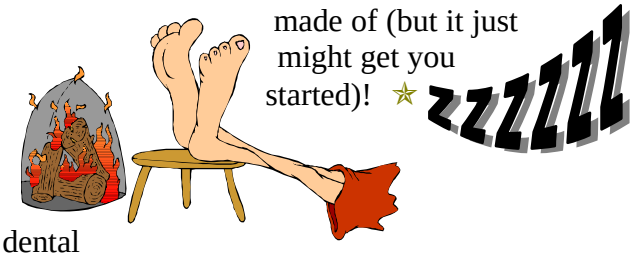
As the State Radiation Safety Officer (SRSO), managing your State's Radiation Safety Program (RSP), you'll want to take a closer look at the TB! This is especially true if you have either fixed and/or field medical and dental x-ray units at the Troop Medical Clinic (TMC) or a Medical Treatment Facility. As you review TB MED 521, you will see that responsibilities are well delineated, but the ultimate responsibility for the Radiation Protection Program (RPP, i.e., the RSP) falls on the SRSO.

Commanders of Regional Medical Commands (RMC) will review the RPP at medical and dental facilities within their region at least every three years! You, the SRSO, should initiate this review, if you are not notified in a timely manner. The RMC will review such RPP elements as the dosimetry program, surveys, personnel qualifications and training records, SOPs, your QA program, and the list goes on..

Another requirement states that the Radiation Protection Officer (RPO, i.e., Radiation Safety Officer) will review all written Radiation Protection SOPs within the facility at least annually to ensure accuracy.

A sample RPP Evaluation Checklist has also been incorporated into the TB. This will help you to assess areas of your RPP that may need improvement. When we update our CECOM IRSP evaluation checklist, we'll be incorporating these new requirements, as well.

But until then, picture this: you sitting in your cozy living room, a few logs gently burning in the fireplace, a bottle of merlot, a highlighter and the TB MED…. this may not be the stuff dreams are made of (but it just might get you started)! ☆



We stand corrected:

On page 9 of the OCT 2002 RADCO, we incorrectly listed the NRC license for the MC-1 as **21-010222-05**. It is really **21-01222-05**. (We have taken the appropriate actions and have had our eyes checked)…☺

...in the field

by Lyle Farquhar

PUZZLES & BRAIN-TEASERS

QUICKIE QUIZ:

1. Each loss of an M43A1 CAD is reportable to the NRC under Title 10 Code of Federal Regulations Part __.

a. 20 b. 15
c. 100 d. 25

2. The ionizing radiation dosimetry service provided by the U.S. Army Ionizing Radiation Dosimetry Center at Redstone Arsenal is accredited by the:

a. NRC
b. NVLAP
c. NGB
d. DOT

3. The NRC license number for the MC-1 Tester, Density & Moisture Nuclear Method is:

a. BML 29-01022-14
b. BML 01-00126-19
c. BML 21-01222-05
d. BML 19-30563-01

4. The leak test frequency for the MC-1 Tester, Density & Moisture Nuclear Method is:

a. Quarterly
b. Semi-Annual
c. Not Required
d. Annual

5. The most current version of the CECOM Wipe Test Analysis Request Form is dated:

a. May 2001
b. September 2002
c. May 2001
d. September 2001

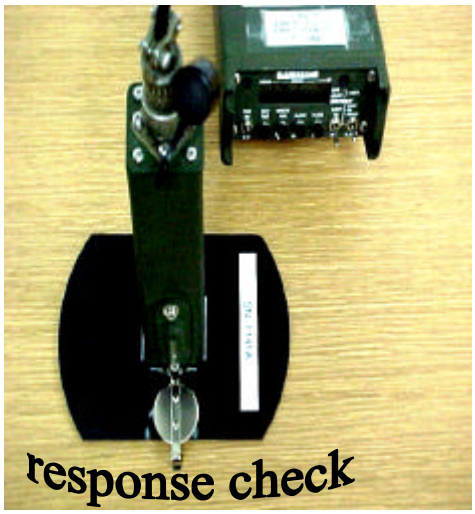
GOOD LUCK....!! the answers are on Page 12

It's Outta' the Question! w/Burt "the answer man"

Our **1st question** comes from Ms. Ivanna Know out of Whereabouts, IA. She writes: "*I am a Local Radiation Safety Officer and would like to know if there is one location that provides comprehensive information for Radiation Safety Officers?"*

Answer: Ms. Ivanna Know, there certainly is. The whereabouts of this location is the Internet and the site is the DA RSO Reference Guide. This site contains: Template SOPs; Army, NGB, and NRC regulations; current NRC licenses governing radioactive commodities; Forms; Regulatory Guides; TMs; TBs; TRs; the new Dosimetry Customer Handbook; and a lot of other useful information pertaining to a Radiation Safety Program. You can visit the DA RSO Website at the following address: http://www.monmouth.army.mil/rso/.

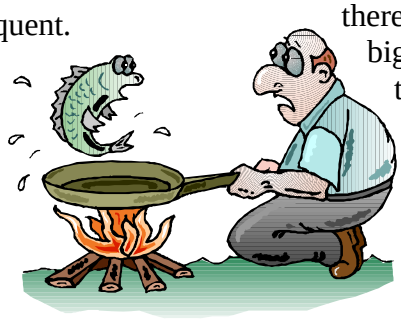
Our **2nd question** comes from Mr. Rye Fra'got out of Shroonville, CA. Mr. Fra'got writes: ***"I attended the CECOM Radiation Safety Officer course a couple of years ago and forgot what the instructor said about testing RADIACs used to support my Radiation Safety Program. I send it out for calibration and when I get it back I put it in the closet. Isn't there something else I'm supposed to do?"***



Answer: Mr. Fra'got I think there is several things you neglected to do. I would first like to say you are to be commended for remembering to send your RADIAC out for calibration. That said, might I suggest you move out-of Shroonville. Please try to remember some key words such as surveys, response testing, background readings, survey points, etc.

Now, back to your original question. You must response test your RADIAC daily or prior to use, whichever is less frequent. For example, if you are going to use the RADIAC today you must first perform a response test. If the RADIAC passes the response check, you can use it for the entire day without performing an additional test. If you only use your RADIAC once a week, then you only have to response test it once a week (on the same day you use it); if you use it three days a week, then response test it on each of the three days. And don't forget, Mr. Fra'got, to annotate the results of the response test on the Response Test Log Sheet every time you perform the test!

This is Burt "the answer man" signing off until next year and wishing you a joyous holiday season…. and reminding you to keep those questions coming…. 'cause in this big, wide, **"RAD"** world, there's always bigger fish that need fryin'. ☆



NONIONIZING CORNER .....

The 'TPIAL' LASER... How to Keep from Seeing RED..!!!

CECOM recently issued a Ground Precautionary Message (GPM 2002-008) pertaining to the AN/PEQ-2A, Target Pointer Illuminator/Aiming Light (TPIAL), Line Item Number (LIN) J03261; NSN: 5855-01-447-8992.

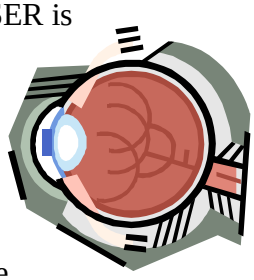
The content of the GPM message involved clarification of safe operational requirements for the ***Training Mode*** vs. ***Tactical Mode*** of the TPIAL. Units that utilize this item must abide by the safety information that follows. SERIOUS INJURY MAY OCCUR if this guidance is not followed.

The TPIAL features two (2) modes of operation controlled by a ***safety block*** installed next to the mode selector. When the safety block is installed with the blue side up/visible the system will be in the ***Training Mode***. When the safety block is installed with the black side up/visible, the system will be in the ***Tactical Mode***. The safety block must never be completely removed from the system and must always be affixed to the AN/PEQ-2A. Both modes are discussed further.

IMPORTANT:

Prior to each mission the user must insure that the Safety Block is installed in the appropriate position.

In the ***Training Mode*** the system can be used for Force-on-Force training. This is further addressed in the system technical manual. This is a low optical power mode of operation. When in the *"Aim-Lo"* position, the system is a Class 1, eye safe LASER with no potential for eye hazard. When in the *"Dual-Lo"* position the system is a Class 3a LASER and is assigned a hazard distance of 25-meters for the unaided/naked eye and 160-meters when using 7x optics.



The LASER is not likely to cause injury if viewed with the naked eye, but can cause injury to the eye at short distances if the beam is focused or viewed through magnifying optics such as binoculars. With reasonable precautions, similar to those required for the Multiple Integrated LASER Engagement System (MILES), training may be safely conducted with the AN/PEQ-2A in this mode.

In the ***Tactical Mode*** the unit will be in a high optical power mode of operation. In this mode the system is a Class 3b LASER. The ***Tactical Mode*** **is not** authorized for Force-on-Force training and **must not** be used during Force-on-Force training. The system must be left in the ***Training Mode*** during all Force-on-Force training. In the ***Tactical Mode***, the system has a hazard distance of 220 meters with the naked eye and 1300 meters when using 7x optics. The LASER can be used in the ***Tactical Mode*** on Combat Operations or on approved LASER ranges that are cleared of personnel in the firing zone. This is further addressed in the system technical manual.

It is important that you understand that the TPIAL (AN/PEQ-2A) emits ***invisible infrared LASER radiation,*** so avoid direct exposure to its beam**.** **Do not** stare into the LASER beam exit port through binoculars or telescopes.

Do not point the infrared LASER at mirror-like surfaces as any such reflection is just as harmful as viewing the invisible LASER beam directly. Though it shouldn't need to be said, do not shine the infrared LASER beam at other individuals. Like most other types of electromagnetic radiation (e.g. radiofrequency, x-rays, etc.), just because we can't see it, doesn't mean it's not there or that it won't harm us.

Should you require further information concerning this message, please contact Rich LaScala, x 6410, or Jay Hanrahan, x 6406, of our directorate. The CECOM Logistics/Readiness POC is Mr. Andrew Flora, (732) 532-2544; email: andrew.flora@mail1.monmouth.army.mil ☆

QUICKIE QUIZ SOLUTIONS:

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c. 100 d. 25

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d. Annual

5. The most current version of the CECOM Wipe Test Analysis Request Form is dated:

a. May 2001
b. September 2002
c. May 2001
d. September 2001

RADCO REGISTER E-MAIL Address Form

The **RADCO Register** is published by the CECOM DS to support the NGB State Radiation Safety Programs. It is distributed electronically. Help us ensure you don't miss a single issue.

Please fill out this form and FAX it to us @ **732-542-7161**.

You can also mail it to:
USACECOM, Directorate for Safety (DS), ATTN: AMSEL-SF-RE (ZIOLA), Building 2539, Fort Monmouth, NJ 07703-5024.

Or better yet, email your info to us at: gary.ziola@mail1.monmouth.army.mil

Name: _____ **Title:** _____

Organization/Facility: _____

Address: _____

City: _____ **State:** _____ **Zip:** _____

E-mail _____